REMARKS

In response to the Office Action mailed February 24, 2005, Applicants respectfully request reconsideration. Claims 7, 9, 12, and 15 have been amended. New claims 16-34 have been added. Claims 1-5 were allowed. As a result, claims 7, 9, 12, 15 and 16-34 are pending for examination with claims 16 and 29 being independent claims. No new matter has been added.

Claim Objections

Claims 7, 9, 12, and 15 were objected to under 37 CFR 1.75c as being in improper form. Claims 7, 9, 12, and 15 have been amended to remove the multiple dependencies, and should now be in condition for allowance.

Allowable Subject Matter

Applicants note with appreciation that claims 1-5 have been allowed.

New Claims

Applicants have added new claims 16-34 to more fully define applicants' contribution to the art.

Claim 16 recites an integrated circuit temperature sensor for sensing a temperature of at least a portion of the integrated circuit. The sensor includes an analog-to-digital converter that provides a digital representation of the temperature. The sensor also includes a sensing circuit that provides a first voltage representative of the temperature and a reference voltage. The sensor further includes a calibration circuit that provides high conversion threshold and a second voltage representative of the temperature to the analog-to-digital converter. The calibration circuit includes a first amplifier that provides the high conversion threshold. The first amplifier being coupled to the reference voltage. The calibration circuit also includes a second amplifier that provides the second voltage representative of the temperature of the at least a portion of the integrated circuit. The second amplifier is coupled to the first voltage representative of the temperature.

Claim 16 is patentable because the art of record does not teach or suggest a calibration circuit having the elements recited in claim 16.

Claim 29 recites a method of sensing a temperature of at least a portion of an integrated circuit. The method includes providing a first voltage representative of the temperature. The method also includes providing a reference voltage. The method also includes providing, to an analog-to-digital converter, a high conversion threshold at least partially based on the reference voltage. The method further includes providing, to the analog-to-digital converter, a second voltage representative of the temperature at least partially based on the first voltage representative of the temperature.

Claim 29 is patentable because the art of record does not teach or suggest providing a high conversion threshold and a voltage representative of temperature to an analog-to-digital converter.

CONCLUSION

A Notice of Allowance is respectfully requested. The Examiner is requested to call the undersigned at the telephone number listed below if this communication does not place the case in condition for allowance.

If this response is not considered timely filed and if a request for an extension of time is otherwise absent, Applicant hereby requests any necessary extension of time. If there is a fee occasioned by this response, including an extension fee, that is not covered by an enclosed check, please charge any deficiency to Deposit Account No. 23/2825.

Respectfully submitted,

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